FACT SHEET

as required by LAC 33:IX.2411, for draft **Louisiana Pollutant Discharge Elimination System Permit** No. **LA0040207; AI 19176; PER20060001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

I. **THE APPLICANT IS:** Terrebonne Parish Consolidated Government
North Wastewater Treatment Plant
P.O. Box 2768
Houma, LA 70361

II. **PREPARED BY:** Angela Marse

DATE PREPARED: June 12, 2007

III. **PERMIT ACTION:** LPDES permit LA0040207, AI19176

LPDES application received: June 16, 2006

LPDES permit issued: November 1, 2001
LPDES permit expired: April 29, 2007

IV. **FACILITY INFORMATION:**

A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment works serving west Houma and additional sewered areas bordering the City limits.

B. The permit application does indicate the receipt of industrial wastewater. However, there are no pretreatment categorical standards for the indirect discharges or the discharge consists of sanitary wastewater only. A summary of industrial dischargers is included in the attached Pretreatment Evaluation and Recommendation.

C. The facility is located at 2000 St. Louis Canal Road in Houma, Terrebonne Parish.

D. The treatment facility consists of an equalization basin with aerators followed by a primary settling tank. After primary clarification, the wastewater is pumped to an activated bio-filtration tower followed by an aeration basin. Wastewater then flows to the flocculation tanks and secondary clarification. Disinfection is by chlorination. Sludge from the process is returned to the primary clarifier. Settled sludge from the primary clarifier is pumped to an anaerobic digester followed by an aerobic digester. Digested sludge is passed through a filter press once every three months and hauled off-site for disposal. Supernatant from both digesters is returned to the beginning of the process.

E. Outfall 001

Discharge Location: Latitude 29°37'45" North
Longitude 90°44'1O" West

Description: treated sanitary wastewater

Design capacity: 16 MGD

Type of Flow Measurement which the facility is currently using: Continuous Recorder

V. RECEIVING WATERS:

The discharge is into the St. Louis Canal, thence into Lake Houma, thence into the Intracoastal Canal in segment 120304 of the Terrebonne Basin. (The St. Louis Canal used to flow to Bayou Terrebonne in subsegment 120301, but has been diverted to the Intracoastal Canal.) Segment 120304 is listed on the 303(d) list of impaired waterbodies.

The **critical low flow** (7Q10) of the St. Louis Canal is 5.3cfs. The **hardness value** is 186 mg/l and the **fifteenth percentile value for TSS** is 65 mg/l. Hardness and TSS values are based on data from the previous permit.

The designated uses and degree of support for Segment 120304 of the Terrebonne Basin are as indicated in the table below[1/]:

Overall Degree of Support for Segment	Degree of Support of Each Use						
Fully Supported	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
	Fully Supported	Fully Supported	Fully Supported	N/A	Fully Supported	N/A	N/A

[1/] The designated uses and degree of support for Segment 120304 of the Terrebonne Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2004 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

Section 303 (d) of the Clean Water Act as amended by the Water Quality Act of 1987, and EPA's regulations at 40 CFR 130 require that each state identify those waters within its boundaries not meeting water quality standards. The Clean Water Act further requires states to implement plans to address impairments. LDEQ is developing Total Maximum Daily Loadings Studies (TMDLs) to address impaired waterbodies. Subsegment 120304 of the Terrebonne Basin is on the 2004 Integrated 303(d) List of Impaired Waterbodies. The suspected causes of impairment are organic enrichment/low DO (EPA-Category 5) and nutrients (EPA-Category 5).

To date no TMDLs have been completed for this waterbody. A reopener clause has been established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by a TMDL. Suspected causes of concern are addressed in a manner consistent with the Department's permitting guidance for implementing Louisiana's surface water quality standards as follows:

Organic enrichment/low DO
BOD_5 is used as a method to measure the amount of dissolved oxygen in the waste stream utilized by organisms during the decomposition of organic material over a five day period. To protect against the discharge of oxygen depleting pollutants at levels that would cause in stream oxygen problems, BOD_5 limits have been place in the permit.

Nutrients
Nutrients take up oxygen in the stream making it less available for aquatic life. Examples of nutrients are ammonia nitrogen, nitrate/nitrite, and phosphorus. Because discharges used to go to Bayou Terrebonne in Subsegment 120301 which is impaired for nitrate and phosphorus, the previous permit required monitoring and reporting of total nitrate and total phosphorus. The discharge now goes to the Intracoastal Canal (from the St. Louis Canal) and the Intracoastal Canal is impaired for nutrients. Since nitrate and phosphorus are considered nutrients and were monitored in the previous permit, it is proposed the North Plant continue to monitor these parameters in the proposed permit.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 120304 of the Terrebonne Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated September 29, 2006 from Watson (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between LDEQ and the FWS, no further informal (Section7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered species or candidate species or their critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit modification and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation
Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Mrs. Angela Marse
Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:

Final Effluent Limits:

OUTFALL 001

The permit application submitted June 16, 2007 did not indicate any process changes or increases in flow at the facility. To date, no TMDLs have been completed for the Terrebonne Basin. Therefore, effluent limitations will remain the same as the previous permit.

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
BOD_5	1334	10 mg/l	15 mg/l	Statewide Sanitary Effluent Limitations Policy for facilities of this type and size.
TSS	2001	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
Total Nitrate	---	Report mg/l	Report mg/l	Based on the previous permit and receiving stream impairments.
Total Phosphorus	---	Report mg/l	Report mg/l	Based on the previous permit and receiving stream impairments.

Other Effluent Limitations:

1) **Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgment in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) **pH**

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C, the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.
The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time. (Limits as established through BPJ considering BCT for similar waste streams in accordance with LAC 33:IX.5905.C.)

3) **Solids and Foam**

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

4) **Total Residual Chlorine**

If chlorination is used to achieve the limitations on Fecal Coliform Bacteria, the effluent shall contain NO MEASURABLE Total Residual Chlorine (TRC) after disinfection and prior to disposal. Given the current constraints pertaining to chlorine analytical methods, NO MEASURABLE will be defined as less than 0.1 mg/l of chlorine. The TRC shall be monitored daily by grab sample.

Toxicity Characteristics

A whole effluent toxicity limit (WET) limit was included in the previous permit. It was carried over from the 1995 NPDES Permit. There is no record of failures for the North Treatment Plant or a TRE in the files. Therefore, the WET limit is being removed from the proposed permit. (See the Biomonitoring Frequency Recommendation attached to this Fact Sheet.) However, biomonitoring will still be required as a condition of the permit. This is based on information contained in the permit application. There may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream in violation of Section 101(a)(3) of the Clean Water Act. The State has established a narrative criteria which, in part, states that 'No substances shall be present in the waters of the State or the sediments underlying said waters in quantities alone or in combination will be toxic to human, plant, or animal life ...' (LAC 33:IX.1113.B.5).

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates the effects of synergism of the effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. LAC 33:IX.1121.B.3. provides for the use of biomonitoring to monitor the effluent for protection of State waters. The biomonitoring procedures stipulated as a condition of this permit are as follows:

The permittee shall submit the results of any biomonitoring testings performed in accordance with the LPDES Permit No LA0040207 **Section E** for the organisms indicated below.

TOXICITY TESTS	FREQUENCY
Chronic static renewal 7-day survival & reproduction test using *Ceriodaphnia dubia*	1/quarter*
Chronic static renewal 7-day survival & growth test using *Pimephales promelas*	1/quarter*

Dilution Series - The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional concentrations shall be 26%, 35%, 46 %, 62%, and 82%. The low-flow effluent concentration (critical low-flow dilution) is defined as 82% effluent. The critical dilution is calculated in Appendix B-1 of this fact sheet. Results of all dilutions shall be documented in a full report according to the test method publication mentioned in the **Biomonitoring Section E** under Whole Effluent Toxicity. This full report shall be submitted to the Office of Environmental Compliance as contained in the Reporting Paragraph located in the **Biomonitoring Section E** of the permit.

The permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or waterbody. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.2903. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

* In accordance with the Environmental Protection Agency (Regional 6) biomonitoring testing frequency accelerations' (s), the biomonitoring frequency shall be once per quarter for *Pimephales promelas* and *Ceriodaphnia dubia*. If there are no significant lethal effects demonstrated at or below the critical dilution during the first four quarters of testing, the permittee may certify fulfillment of the biomonitoring testing requirements to the permitting authority and testing may be reduced to not less than once per six month for the more sensitive species (usually *Ceriodaphnia dubia*) and not less than once per year for the less sensitive species (usually *Pimephales promelas*) for the remainder of the term of the permit. Upon Expiration of the permit, the monitoring frequency for both test species shall revert to once per quarter until the permit is reissued.

X. PREVIOUS PERMITS:

LPDES Permit No. LA0040207: Issued: November 1, 2001
Expired: October 31, 2006 (extended in TEMPO to April 29, 2007)

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Monthly Avg.	Weekly Avg.	Measurement Frequency	Sample Type
Flow	Report	Report	Continuous	Recorder
BOD_5	10 mg/l	15 mg/l	1/day	12-hr.composite
TSS	15 mg/l	23 mg/l	1/day	12-hr.composite
Total Residual Chlorine	---	---	1/day	Grab
Fecal Coliform Colonies	200	400	1/day	12-hr. composite
Total Phosphorus	Report	Report	1/quarter	24-hr. composite
Total Nitrate	Report	Report	1/quarter	24-hr. composite
pH	---	---	1/day	Grab

The permit contains biomonitoring.
The permit contains pollution prevention language.
The previous permit contains pretreatment language.

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

A review of the files indicates the following most recent inspection was performed to assess damage from Hurricane Katrina. Numerous other inspections/Surveillance activities have been performed in response to complaints regarding leaking collection system and lift station overflows.

Date – October 28, 2005
Inspector - LDEQ
Findings and/or Violations -

1. Wind generated by Hurricane Katrina resulted in damages to lift stations. Falling trees damaged electrical lines. Wind damaged fiberglass walls and shingle roofs. Wood and chain link fences were torn from their posts or tilted by wind or debris.
2. At the time of inspection, 22 sites that had received damage had been repaired. Twenty nine stations were still in need of repair.

B) Compliance and/or Administrative Orders

A review of the files indicates no recent enforcement actions administered against this facility.

C) **DMR Review**

A review of the discharge monitoring reports for the period beginning January, 2005 through February, 2007 has revealed the following violations:

Effluent Characteristic	Number of Violations
BOD_5	1
TSS	3
Fecal Coliform	2

Numerous unauthorized discharges were also reported regarding leaks in the collection system and lift station overflows.

XII. ADDITIONAL INFORMATION:

PERMIT REOPENER CLAUSE

In accordance with LAC 33:IX.2361.C.3, this permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(c) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act, if the effluent standard or limitations so issued or approved:

a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

b) Controls any pollutant not limited in the permit; or

c) Requires reassessment due to change in 303(d) status of waterbody; or

d) Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body. The Environmental Protection Agency will be conducting a TMDL in the Terrebonne Basin Segment 120304. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions as a result of the TMDL. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 16 MGD.

Effluent loadings are calculated using the following example:

BOD: 8.34 lb/gal x 16 MGD x 10 mg/l = 1334 lb/day

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows over 16 MGD.

STORMWATER PROVISIONS

The requirements of Part II, Section B apply to stormwater discharges associated with industrial activity as defined at LAC 33:IX.2511.B.14.i and Sector T of the LDPES Multi-Sector Stormwater Permit LAR5000. These requirements apply to point source stormwater discharges associated with domestic sewage treatment works with a design flow of 1.0 MGD or more. Terrebonne Parish Consolidated Government's North Treatment Plant has a design capacity over 1 MGD. Therefore, they will be required to develop a Stormwater Pollution Prevention Plan to be effective six months from the effective date of the permit.

Pretreatment Requirements

Based upon consultation with LDEQ pretreatment personnel, standard pretreatment language has been included in the permit.

XIII TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

XIV REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards", Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program", Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Terrebonne Parish Consolidated Government, North Wastewater Treatment Plant, June 14, 2006.